

Noise Canceling Headphones

MDR-NC200D

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Operating Instructions

Manual de instrucciones



* 4 2 8 3 4 6 1 2 * (1)

English

Noise Canceling Headphones

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To reduce the risk of electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

The validity of the CE marking is restricted to only those countries where it is legally enforced, mainly in the countries EEA (European Economic Area).

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The following FCC statement applies only to the version of this model manufactured for sale in the USA. Other versions may not comply with FCC technical regulations.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

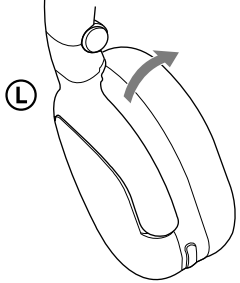
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Features

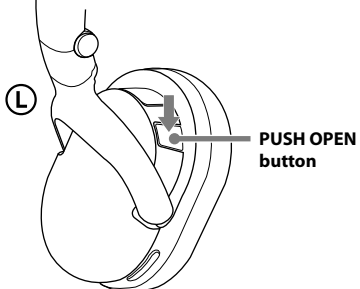
- Digital noise canceling headphones with Sony's unique DNC Software Engine.**
Creation of a high-precision canceling signal delivers outstanding noise canceling performance.
- AI (Artificial Intelligence) Noise Canceling function.**
Select AI NC button for optimal noise canceling mode based on intelligent analysis of the environmental ambient noise.
- Digital Equalizer and full digital S-Master amplifier delivers ideal frequency response and high-quality music reproduction.
- Large 40 mm dynamic type driver units deliver a wide frequency range and broad dynamic range.
- Pressure relieving urethane cushion in the earpad.**
The earpad structure provides comfort without stress even after extended use.
- Lightweight design creates extremely comfortable wearing fit.
- Foldable, flat-storage design for easy portability.
- Built-in monitor function to hear surrounding sound without taking off the headphones.
- Able to use as a regular headphones even when the POWER switch is set to "OFF".
- Supplied plug adaptor for easy connectivity to stereo or dual jack for in-flight music services.

Installing a battery

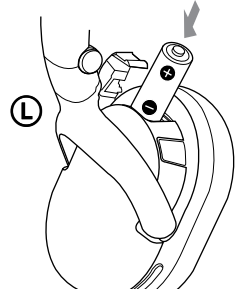
1 Adjust the left housing as illustrated.



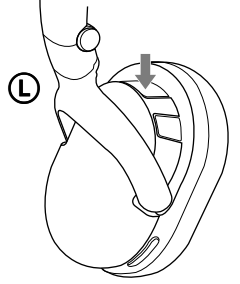
2 Push the PUSH OPEN button to open the battery lid.



3 Insert one LR03 (size AAA) battery with end first.



4 Close the battery lid.



Battery life

Battery	Approx. hours*1
Sony alkaline battery LR03 SIZE AAA	22 hours*2

*1 1 kHz, 0.1 mW + 0.1 mW output

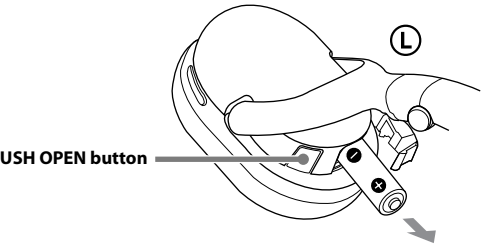
*2 Time stated above may vary, depending on the temperature or conditions of use.

Note

The supplied battery was included in the package during manufacturing (as a convenience to the user), it is possible that the battery life may be depleted by the time of purchase. The actual life of the supplied battery may be shorter than the standard time described in this manual when using a fresh battery.

When the battery is low

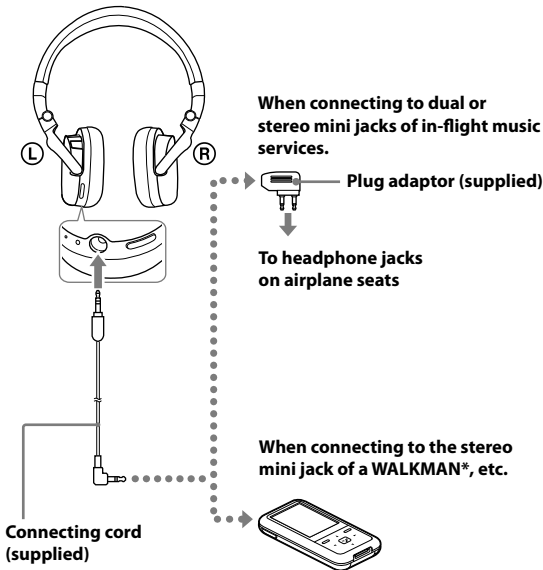
- Replace the battery with a new one when the POWER indicator blinks or lights off. Push the PUSH OPEN button to open the battery lid and remove the battery in the direction as illustrated.



- You can use the headphones even without turning on the power. In this case, the noise canceling function, Digital Equalizer and S-Master are not active, and the headphones operate as passive headphones.

Listening to the music

1 Connect the headphones to the AV equipment.



* "WALKMAN" and "WALKMAN" logo are registered trademarks of Sony Corporation.

Notes

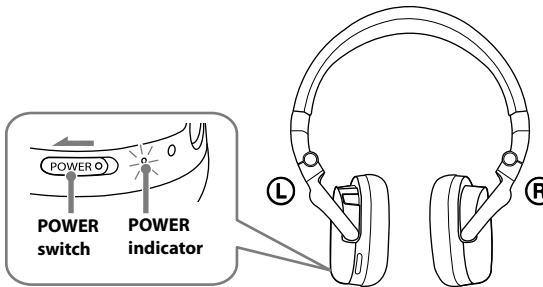
- When connecting the cord, insert the plug into the jack until the green portion of the plug disappears.



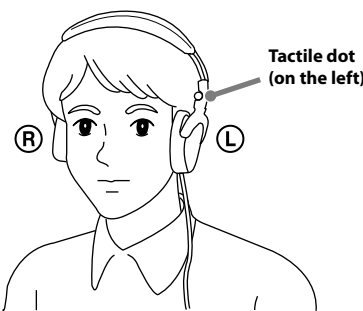
- To disconnect the cord, pull it out by the plug, not the cord, as the inner conductors may break.

2 Turn on the power of the headphones.

The POWER indicator lights up in green. When power is turned on, ambient noise is reduced, and you can listen to music more clearly at a lower volume.

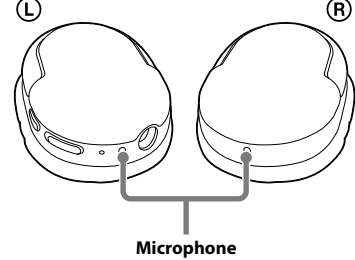


3 Wear the headphones marked on your right ear and the one marked (has a tactile dot for ease of use.) on your left ear.



Notes

- Adjust the earpads so that they cover your ears, otherwise noise canceling will not function properly.
- Do not cover the microphone of the headphones with your hands. The noise canceling function may not work properly.

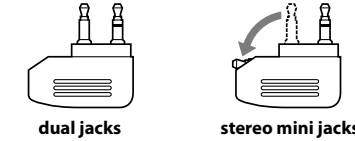


- After you turn on the power of the headphones, you may hear a slight hiss. This is the operating sound of the noise canceling function, not a malfunction.
- Because the headphones are of a high density enclosure, forcing them against your ears may result in eardrum damage. Avoid using the headphones where they are liable to be struck by people or other objects, such as a ball, etc. Pressing the headphones against your ears may produce a diaphragm click sound. This is not a malfunction.

4 Turn on the power of the AV equipment.

Notes on using on the airplane

- The supplied plug adaptor can be connected to the dual or stereo mini jacks of in-flight music services.



- Do not use the headphones when use of electronic equipment is prohibited or when use of personal headphones for in-flight music services is prohibited.

Utilizing the AI Noise Canceling

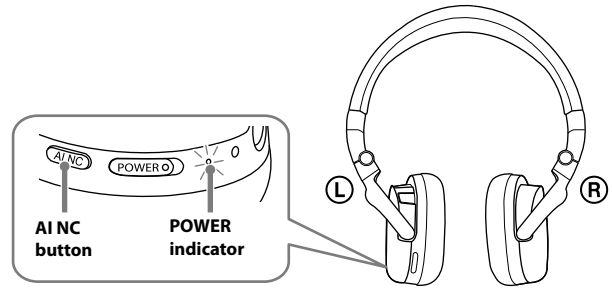
AI Noise Canceling

AI Noise Canceling is a useful function that automatically selects one of the noise canceling modes. This function provides the most effective noise canceling mode by immediately analyzing ambient sound components when the AI NC button is pressed.

Press the AI NC button.

When you press the AI NC button and the POWER switch is set to "ON", beep sounds come from the headphones to inform you that the unit has started analyzing ambient sound components (approx. 3 seconds). During analysis, sound reproduction from the unit is stopped and the POWER indicator blinks.

When analysis is completed, the most effective noise canceling mode is set automatically, and sound reproduction from the headphones starts.



Noise canceling mode types

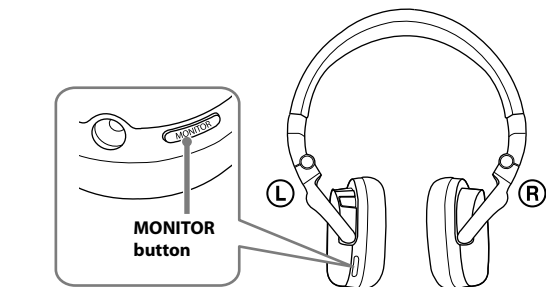
NC Mode A: Noise mainly in an airplane is effectively reduced.
NC Mode B: Noise mainly in a bus or a train is effectively reduced.
NC Mode C: Noise mainly found in an office environment (PC, copier, air ventilation, etc.) is effectively reduced.

Tips

- When the power of the headphones is turned on, NC Mode A is set. (See "Noise canceling mode types" for details about NC Mode A.)
- Press the AI NC button again to reset the noise canceling mode if ambient noise has changed, such as when you move outdoors from a room.

Hearing environment sound for safety

Press the MONITOR button while the POWER switch is set to "ON", playback silences, and you can hear the surrounding environment. To cancel this function, press the MONITOR button again.



Beep sound and indicator status

Status/Function	Beep sound	Indicator
Power off	No beep	Lights off
Power on	Beep once	Lights on
AI NC	Beep twice	Blinks twice
MONITOR	Beep once	Blinks slowly
Low battery	Long beep (2 seconds)	Blinks quickly (30 seconds)

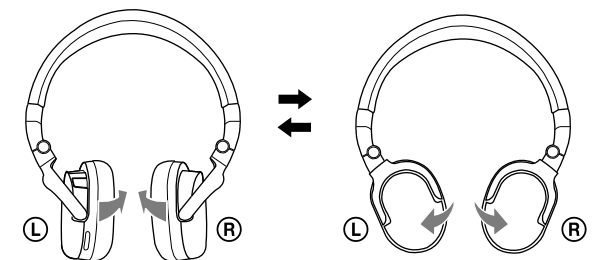
After use

Turn off the power of the headphones and the AV equipment.

Folding the headphones

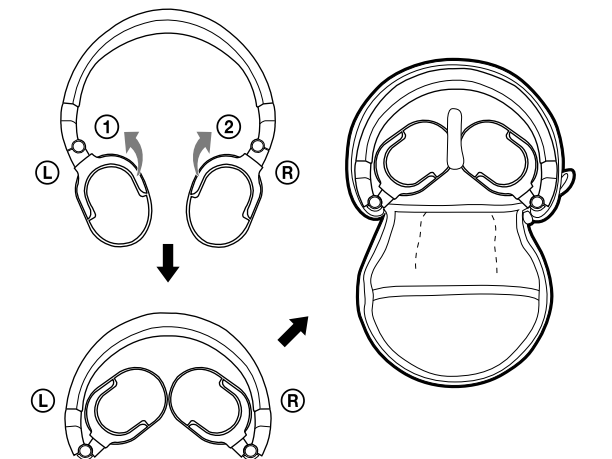
Flat storage

Rotate the housings to make them flat for easy storage in the seat pocket. Restore to their usual position before using.



Putting the headphones in the carrying case

Fold the headphones as illustrated before putting them in the carrying case (supplied).



Precautions

The headphones contain a noise canceling circuit.

What is noise canceling?

The noise canceling circuit actually senses outside noise with built-in microphones and sends an equal-but-opposite canceling signal to the headphones.

- The noise canceling effect may not be pronounced in a very quiet environment, or some noise may be heard.
- The noise canceling effect may vary depending on how you wear the headphones.
- The noise canceling function works for noise in the low frequency band primarily. Although noise is reduced, it is not canceled completely.
- When you use the headphones in a train or a car, noise may occur depending on street conditions.
- Mobile phones may cause interference and noise. Should this occur, locate the headphones further away from the mobile phone.

Notes on usage

- Clean the headphones with a soft dry cloth.
- Do not leave the plug dirty otherwise the sound may be distorted.
- Be sure to consult a Sony dealer when the earpads become dirty or damaged, or when the headphones require repair work.
- Do not leave the stereo headphones in a location subject to direct sunlight, heat or moisture.
- Do not subject the headphones to excessive shock.
- Handle the driver units carefully.
- If you feel drowsy or sick while using these headphones, stop use immediately.

Notes on headphones

Preventing hearing damage

Avoid using headphones at high volume. Hearing experts advise against continuous, loud and extended play. If you experience a ringing in your ears, reduce the volume or discontinue use.

Do not use headphones while driving and cycling, etc.

As headphones reduce outside sounds, they may cause a traffic accident. Also, avoid listening with your headphones in situations where hearing must not be impaired, for example, a railroad crossing, a construction site, etc.

Note on static electricity

In particularly dry air conditions, noise or sound skipping may occur, or mild tingling may be felt on your ears. This is a result of static electricity accumulated in the body, and not a malfunction of the headphones.

The effect can be minimized by wearing clothes made from natural materials.

If you have any questions or problems concerning the system that are not covered in this manual, please consult the nearest Sony dealer.

Troubleshooting

No sound

- Replace the battery. You can use the headphones even without turning on the power. In this case, the noise canceling function, Digital Equalizer and S-Master are not active, and the headphones operate as passive headphones.
- Check the connection of the headphones and the AV equipment.
- Check that the connected AV equipment is turned on.
- Turn up the volume of the connected AV equipment.
- Check if the MONITOR function is on (the indicator blinks slowly). Press the MONITOR button to turn it off.

The noise canceling effect is not sufficient

- The noise canceling function is effective in low frequency ranges such as airplanes, trains, or offices (near air-conditioning, etc.) and is not as effective for higher frequencies, such as human voices.
- Turn on the headphones.

Distorted sound

- Turn down the volume of the connected AV equipment.

Power does not turn on

- Check if the battery has expired (the POWER indicator lights off). Replace the battery with a new one.

No operation works

- Set the POWER switch of the headphones to "OFF", confirm the connections, and then set the POWER switch back to "ON".

Specifications

General

Type	Dynamic, closed
Driver units	40 mm, dome type (CCAW adopted)
Power handling capacity	50 mW
Impedance	68 Ω at 1 kHz (when the power is on) 35 Ω at 1 kHz (when the power is off)
Sensitivity	103 dB/mW (when the power is on) 102 dB/mW (when the power is off)
Frequency response	8 Hz – 23,000 Hz
Total Noise Suppression Ratio*1	Approx. 17.5 dB*2
Power source	DC 1.5 V, 1 $\times$ LR03 (size AAA) battery
Mass	Approx. 180 g (6.4 oz)

Included items

Headphones (1)
Plug adaptor for in-flight use*3 (single/dual) (1)
Connecting cord (1.5 m, gold plated L type stereo mini plug) (1)
Carrying case (1)
Sony LR03 (size AAA) battery (1)
Operating Instructions (1)
Warranty card (1)

*1 Under the Sony measurement standard.

*2 Equivalent to approx. 98.2% reduction of energy of sound compared with not wearing headphones.

*3 May not be compatible with some in-flight music services.

Design and specifications are subject to change without notice.

El diseño y las especificaciones están sujetos a cambio sin previo aviso.